Application No.: 10/623064 Docket No.: TOW-031

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AMENDMENTS TO THE CLAIMS

Please cancel claims 1-6 and 8-9.

Please amend claims 7, 10 and 11 as follows.

1-6. (canceled)

7. (currently amended) A The method for producing a said proton conductive solid polymer electrolyte according to claim 6 comprising an acidic group-possessing polymer which has an acidic group and a basic polymer which is basic, said method comprising:

dissolving, in a solvent, said acidic group-possessing polymer and a monomer which produces polybenzimidazole by means of polymerization,

polymerizing said monomer to produce said polybenzimidazole,

compatibilizing said polybenzimidazole and said acidic group-possessing polymer with each other to produce a compatibilized polymer; and

separating said compatibilized polymer from said solvent, wherein polyphosphoric acid is used as said solvent.

8-9. (canceled)

10. (currently amended) A The method for producing a said proton conductive solid polymer electrolyte according to claim 6 comprising an acidic group-possessing polymer which has an acidic group and a basic polymer which is basic, said method comprising:

dissolving, in a solvent, said acidic group-possessing polymer and a monomer which produces polybenzimidazole by means of polymerization,

polymerizing said monomer to produce said polybenzimidazole,

compatibilizing said polybenzimidazole and said acidic group-possessing polymer with each other to produce a compatibilized polymer; and

separating said compatibilized polymer from said solvent, wherein a mixture of aromatic tetramine and aromatic dibasic acid is used as said monomer.

11. (currently amended) A The method for producing a said proton conductive solid

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polymer electrolyte according to claim 6 comprising an acidic group-possessing polymer which has an acidic group and a basic polymer which is basic, said method comprising:

dissolving, in a solvent, said acidic group-possessing polymer and a monomer which produces polybenzimidazole by means of polymerization,

polymerizing said monomer to produce said polybenzimidazole,

compatibilizing said polybenzimidazole and said acidic group-possessing polymer with each other to produce a compatibilized polymer; and

separating said compatibilized polymer from said solvent, wherein an aromatic compound, which has a carboxylate ester group and a pair of amino groups bonded to an aromatic nuclear, said pair of amino groups being mutually positioned at ortho-positions, is used as said monomer.

12. (original) The method for producing said proton conductive solid polymer electrolyte according to claim 10, wherein a compound represented by any one of the following chemical formulas (16) to (18) is used as said aromatic tetramine:

$$H_2N$$
 H_2N
 NH_2
 NH_2
 NH_2

wherein X9 is any one of O, S, SO₂, CH₂, and CO in said chemical formula (18).

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13. (original) The method for producing said proton conductive solid polymer electrolyte according to claim 10, wherein a compound represented by any one of the following chemical formulas (19) and (20) is used as said aromatic dibasic acid:

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$$R_1$$
00C $C00R_1$ $C00R_1$ $C00R_1$

$$R_{1}OOC \xrightarrow{Y_{9}} X_{9} \xrightarrow{Y_{11}} X_{12} COOR_{1} \cdots (20)$$

wherein Y9 to Y12 are functional groups independently selected from H, CH₃, C₂H₅, F, Cl, I, Br, and Ph, and R1 represents H, CH₃, C₂H₅, or Ph (phenyl group).

14. (original) The method for producing said proton conductive solid polymer electrolyte according to claim 11, wherein a compound represented by the following chemical formula (21) is used as said aromatic compound:

$$H_2N$$
 Y_9
 $COOR_1$
 $COOR_1$

wherein Y9 is a functional group independently selected from H, CH₃, C₂H₅, F, Cl, I, Br, and Ph, and R1 represents H, CH₃, C₂H₅, or Ph (phenyl group).

15. (original) The method for producing said proton conductive solid polymer

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electrolyte according to claim 12, wherein a compound represented by any one of the following chemical formulas and is used as said aromatic dibasic acid:

$$R_1$$
00C $COOR_1$ \cdots (19)

$$R_1$$
00C X_9 Y_{10} Y_{11} Y_{12} $COOR_1$ \cdots (20)

wherein Y9 to Y12 are functional groups independently selected from H, CH_3 , C_2H_5 , F, Cl, I, Br, and Ph, and R1 represents H, CH_3 , C_2H_5 , or Ph.